CLAIMS IN RAILWAY PROJECTS IN PORTUGAL

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ABSTRACT

The importance of claims and disputes in Portuguese public contracting is so large nowadays that most construction managers tend to consider a specific final stage of the project life cycle for dealing with them. The aim of this paper is to characterise claims in railway projects conducted in the last few years in Portugal. A survey was made to project promoters and data from a number of projects has been collected and classified according to usual claim causes as currently adopted in literature. The results of the survey show that project changes and delays contribute to roughly 99% of the claims surveyed.

Keywords: claims, Portuguese public contracting, railway projects

1. INTRODUCTION

In the last years, Portuguese construction stakeholders have widely recognised a sensitive increase in disputes and contractual claims and the same has been reported internationally [Semple *et al.*, 1994, Thompson *et al*., 2000]. According to the experience of the authors, as well as the literature review [Bramble, *et al*., 1995, Diekmann *et al*., 1995], the following reasons may justify the increase of claims in public construction projects in Portugal:

- **Environmental** reasons, especially **economical** (like recession, inflation and unemployment) and **political** reasons (like the decreasing of public investment for controlling the budget deficit).
- **Market** reasons, like internal and external concurrency among contractors in the European Community, leading to the reduction of profits and risk allowances in bids offers.

- **Contractual reasons,** like the complexity of managing new type of contracts (Design/Built, Design/Finance/Build/Operate, Public/Private joint ventures) and biased risk allocation.
- **Legal reasons** related to new lawsuits on environment protection, health and safety and cost control.
- **Organisational reasons** related to complex and bureaucratic administrative procedures, inadequate empowerment or inaccurate quality control during the design phase.

The increase of claims and disputes in public construction projects brings up negative effects in the three principal variables of project management [Gjertsen, 1990], as represented in figure 1 below:

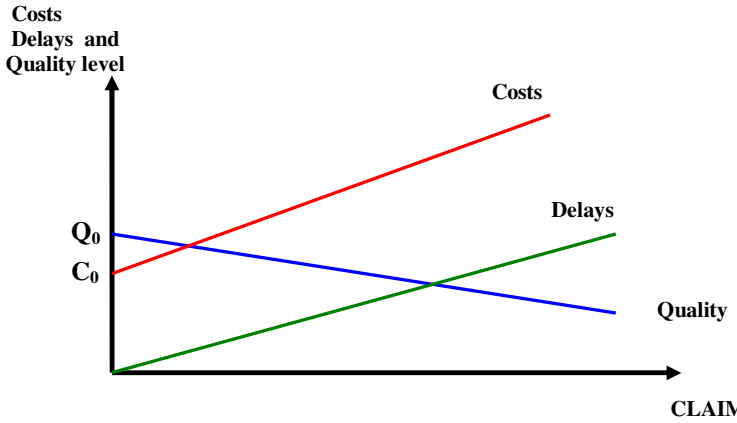

Fig. 1: Evolution of project management variables with construction claims

Additionally, revitalization in the Portuguese public construction sector is expected in the next 15-20 years due to extensive investments in high speed railway infrastructures. The country is planning to construct about 900 Kilometres of new lines[1], new railway stations in the main cities, inter-modal platforms in Lisbon and Oporto, new bridges over Tagus and Douro rivers, and so on [MNE, 2003]. Such a variety of large projects is likely to lay the conditions for claims to occur for one or a combination of the reasons mentioned above.

This paper reviews the type of construction claims submitted by contractors of Portuguese railway projects during the last years. Understanding these events may be useful for predicting future claims and for minimising their impacts in forthcoming similar projects.

2. BACKGROUND TO THE SUBJECT

[1] Lisbon – Porto; Lisbon – Badajoz (Spain); Porto – Vigo (Spain); Aveiro – Salamanca (Spain); Évora – Faro – Huelva (Spain).

A construction claim normally arises when one part, (normally the contractor), believes that in some way, by action or inaction, the other part (usually the client), has broken contractual obligations or expectations, and requests a monetary and/or time compensation. Therefore, a construction claim can be defined as a formal request for time or money, with legal and contractual implications [Bramble *et al.*, 1995].

When a claim is submitted, its value is broken down into several categories of compensation [*Semple et al.,* 1994]. This occurs, not only because it is easier for the contractor to evaluate and separate the damages caused by each particular event, but also to link these events to the legal theory or to the breach of the contractual clause that allows recovering inducted losses.

For those reasons, some attempts have been made for defining different types of construction claims possibly presented by contractors, according to distinct legal and contractual systems [Gjertsen, 1990, Rubio, 1992, Zack, 2002].

Additionally, extensive research has been conducted on the causes of claims. For instance Diekman *et al*. [1985] reported a high proportion of claims due to design errors and client changes. Semple *et al*. [1994], used construction claims to indicate several problems in the construction process, like increase in scope, weather, restricted access and acceleration. Halligan *et al*. [1987] analysed 600 projects and concluded that underlying causes of changes and claims reported by contractors were due to contract documents, site conditions and schedulling problems. Bramble *et al*. [1995] reported that design defects, third party actions/inaction's, and unknown conditions, represented the principal causes of disputes in a set of highway construction projects.

In Portugal there are still few studies about the subject. Moura [2003] had made an effort to classify the different types of construction claims that can be submitted in a public project, accordingly to *Portuguese legal system* namely Decree 59/99, March 3 and Regulation 104/91, April 21, although it focused the study characterising changes and delays type.

3. SCOPE OF THE SURVEY

In the survey conducted by the authors, an inquiry was developed and submitted to REFER *(Rede Ferroviária Nacional* - the Portuguese Railway Company), responsible for the operation, maintenance and construction of new railway infrastructures in Portugal. The objectives of the inquiry were as follows:

- to obtain the total value claimed by contractors in railway projects concluded in Portugal in the period of 1998 to 2002 and the effect of claims for the final cost and duration of those projects;
- to validate the classification of construction claims as proposed in a previous study [Moura, 2003] and to identify the value and the frequency of the most common ones;

- to check the adequacy of the public Portuguese regulations for public contracting [Decree Nº 59/99 (1999) and Regalement Nº 104/2001 (2001)] in dealing with construction claims.

The survey has been restricted to projects over € 3.500.000 because the forthcoming high speed railway projects are expected to be large projects as well. Moreover, smaller projects tend to be contracted to smaller companies, which are less capable and less keen on submitting claims than larger contractors because they may fear client's retaliation.

In order to preclude possible misunderstandings of respondents to the inquiry, the compensation events comprised in some of the 8 types or sub-types of construction claims considered in the survey were described. A further type named "Others" was included for claims not falling into the above types. Claim types inquired were as follows:

- **Changes**
  - **Direct** (extra-works, quantity and quality changes in the bill of quantities or unit prices, reduction in project scope)
    - → **Errors and Omissions (***(includes different site conditions)*
  - **Indirect changes** (claims against engineer's order, rejection or substitution of construction materials, deficiencies or different interpretation of contractual documents, construction process and preparation of works);

- **Beginning and ending of the project** (divergent understanding of the effects resulting from commencement act, interim and definitive reception indenture, bonds and surety releases)
- **Acelleration of works**
- **Delays in work conclusion**
- **Measurement and payments**
- ***Force Majeure***
- **Suspension of works**
- **Termination of contract**
- **Others**

3. GENERAL DATA ANALYSIS

Twenty five railway projects have been surveyed with an initial budget of **€ 773.132.027**. All of these projects were concluded during the 1998-2002 period, and recorded 51 claims totalling **€ 66.333.326**. Figures 2 to 5 compare, for each project, the variables analysed: figure 2 compares original contract values to the amount paid due to claims; figure 3 compares original contract

values to final contract values; figure 4 compares claims requested by contractors to claims paid by clients; figure 5 compares the original contract duration to the project delays.

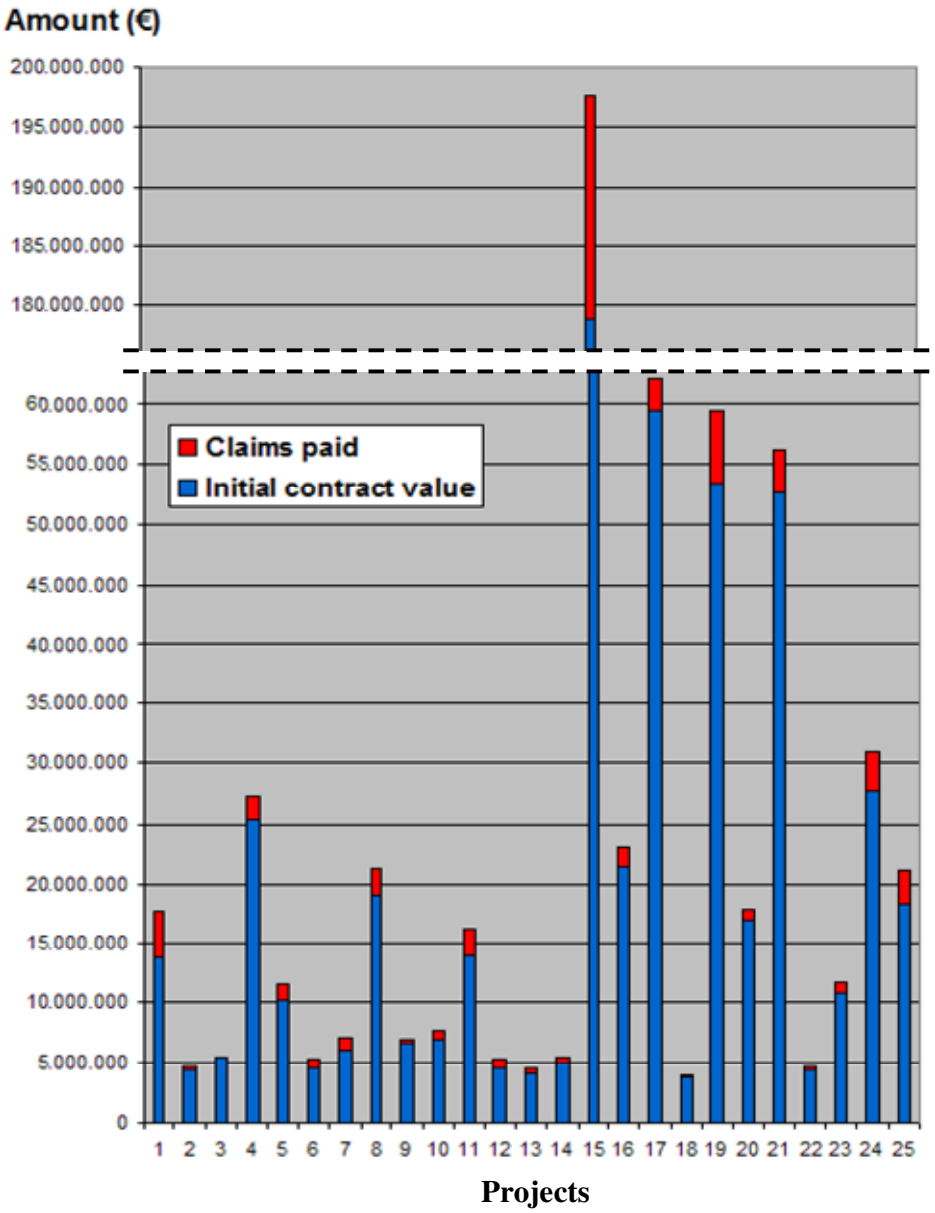

Fig. 2: Comparison between initial contract values and claims paid by the client

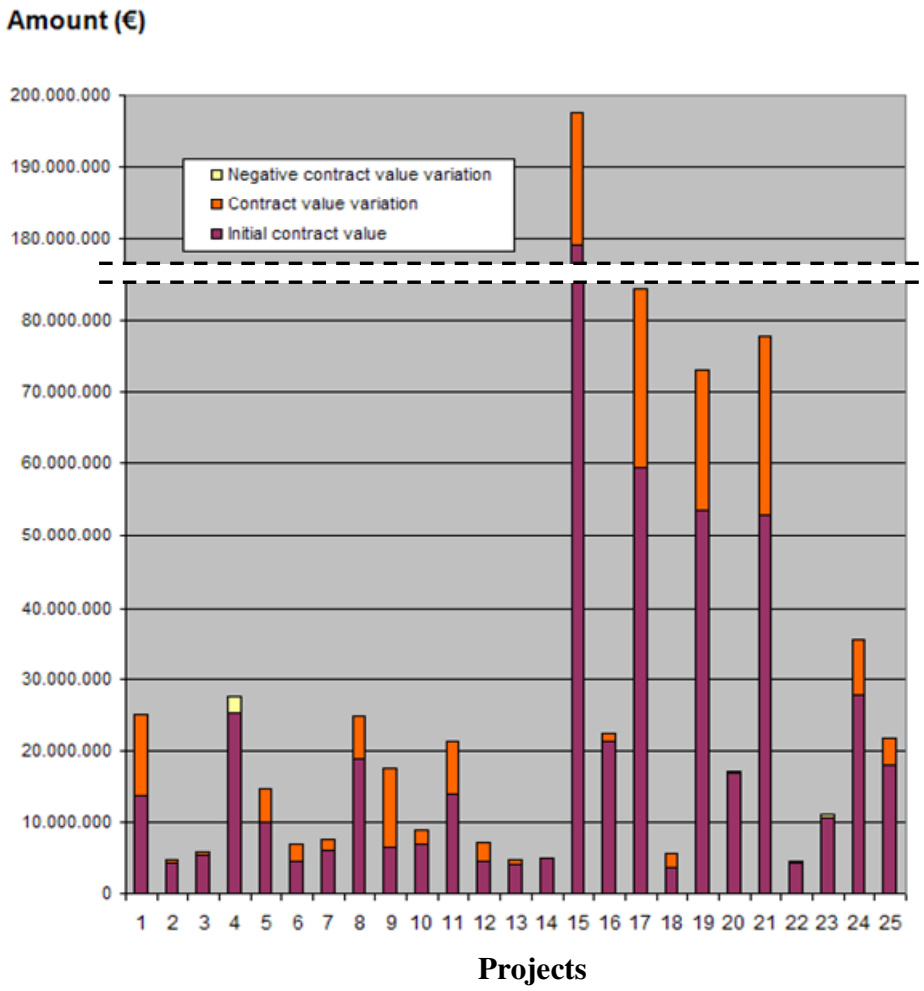

Fig. 3: Comparison of the initial and final contract values

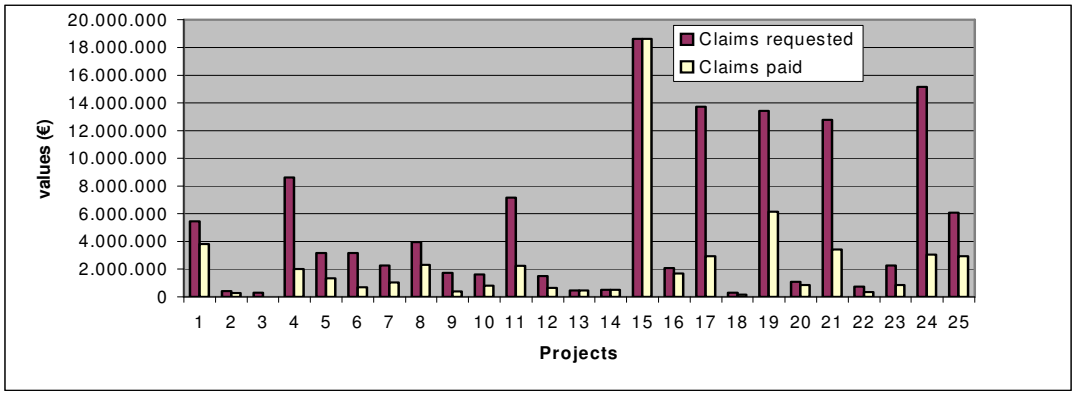

Fig. 4: Comparison between the amount of claims requested and the amount of claims paid

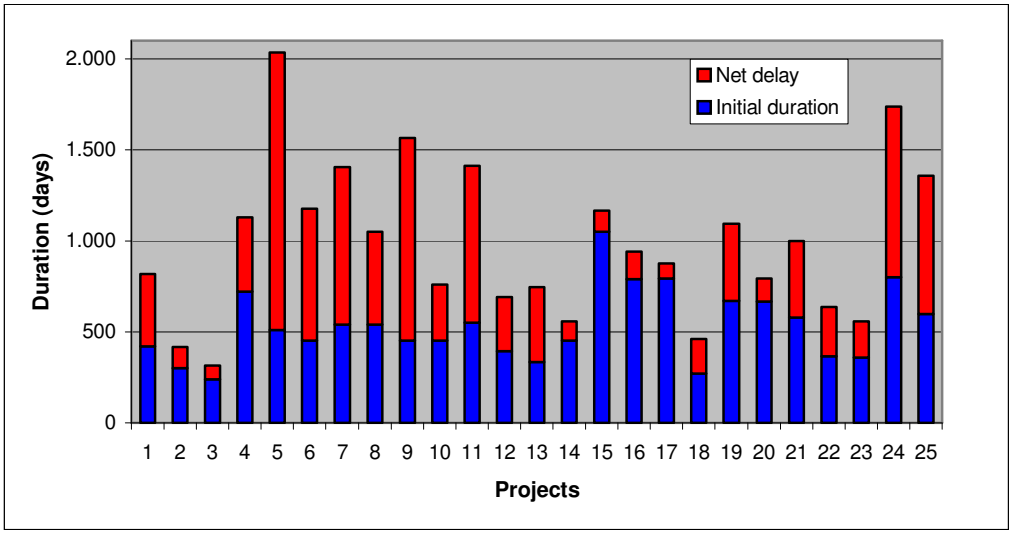

Fig. 5: Comparison between the initial and final duration of the projects

The above results allow for the following conclusions:

- The total amount paid by clients due to construction claims is significant, representing 11% of the initial project values;
- Claims paid by the clients worth 50% of claims requested by contractors which denotes problems in claim identification, quantification and cause-effect demonstration;
- Cost overruns reached in average 25 % of the initial contract value of the projects surveyed which shows a significant amount of design changes.
- Delays are also an important issue as time overruns reached in average 85 % of the original contract duration, causing social and economic costs for all the community, especially in public projects like railway transportation;
- The average values of variables studied (cost and time overruns, claims requested and paid), does not significantly change with the relevance of the initial contract value. This can be seen by withdrawing from the sample analysed, the 3 largest projects on the Lisbon-Porto railway line (numbers 17, 19 and 21), and the railway installation in the Tagus river bridge (project number 15).[2]
- The majority of claims presented by contractors (84 %) were solved by agreement between the parts, without external assistance, and the rest was settled in a pre-judicial compulsory phase.[3]

4. ANALYSIS BY CLAIM TYPES

[2] The former three had an initial contract value 3 to 4 times higher than the average of the others, and the latter was a particular project, conducted under a design-construction model, with an initial contract value of € 180 million.
[3] In the projects surveyed, there was no evidence of courts decision in the construction claim resolution.

The results of the inquiry show that respondents were able to classify claims recorded by types in only 14 of the 25 projects surveyed (56%). This is probably because contractors submitted *Global Claims* instead of detailing them appropriately. Moreover, the amounts corresponding to each claim type were only recognised in 6 projects, encompassing 10 claims. The 51 claims identified in the 14 projects mentioned above were distributed as depicted in figure 6.

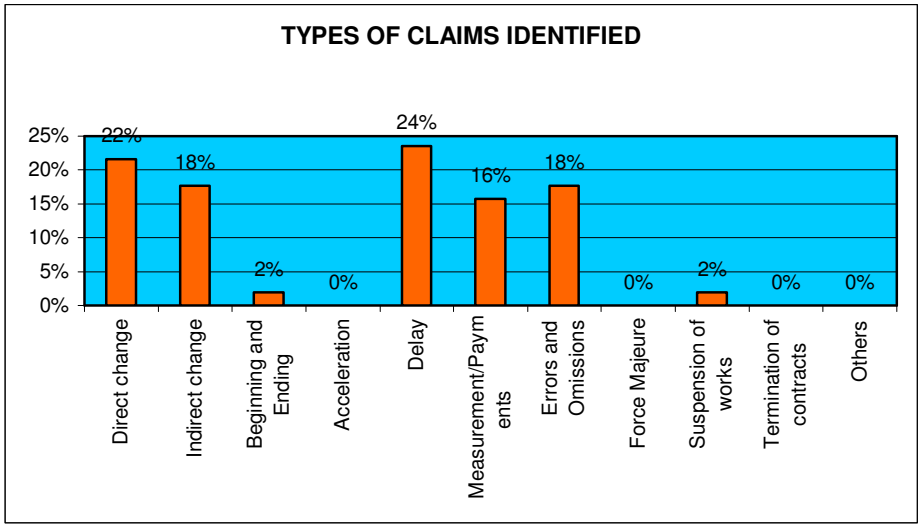

Fig. 6: Different types of claims identified

The figure shows that *Changes* (and its sub-types), *Delays* and *Measurement/Payments* are the most common types of construction claims. Claims due to *Acceleration*, *Force Majeure* and *Termination of Contract* have not been recorded in these projects. There may be several reasons for this: these types of claims were included in global claims; the respondents misunderstood their scope; they were not really presented by contractors in the projects surveyed. Although this is a possibility for the *termination of contracts* claim, because of the difficulty inherent of their resolution in public projects, it is our conviction that *Acceleration* and *Force Majeure* claims actually occurred but could not be properly identified.

On the other hand, respondents did not describe other compensation events[4] beyond the eight types of construction claims listed above. Accordingly, it is reasonable to say that they aggregate the possible compensation events occurring in a railway construction contract, according to the Portuguese regulations for public works [Decree Nº 59/99 (1999) and Silva (2001)].

The distribution of the amount claimed and paid denotes a great concentration in *Direct Changes* and *Delays*, representing 71% and 25 % of the total amount paid by clients (figure 7). Similar conclusions can be obtained, if amount requested by contractors had been used. It is also interesting to verify that contractors recovered almost 100% of the damages claimed within

4 In fact, "Others" claim type was indicated twice but, by the description of the compensation events, they have been aggregated to the appropriate type of claim (delays, in this case)

Direct Change claim type, whether *Delays* were recovered in a percentage smaller than 50%. This assertion can be related to the difficulties in proving some of the delay damages (field and home-office overheads, opportunity costs, etc.).

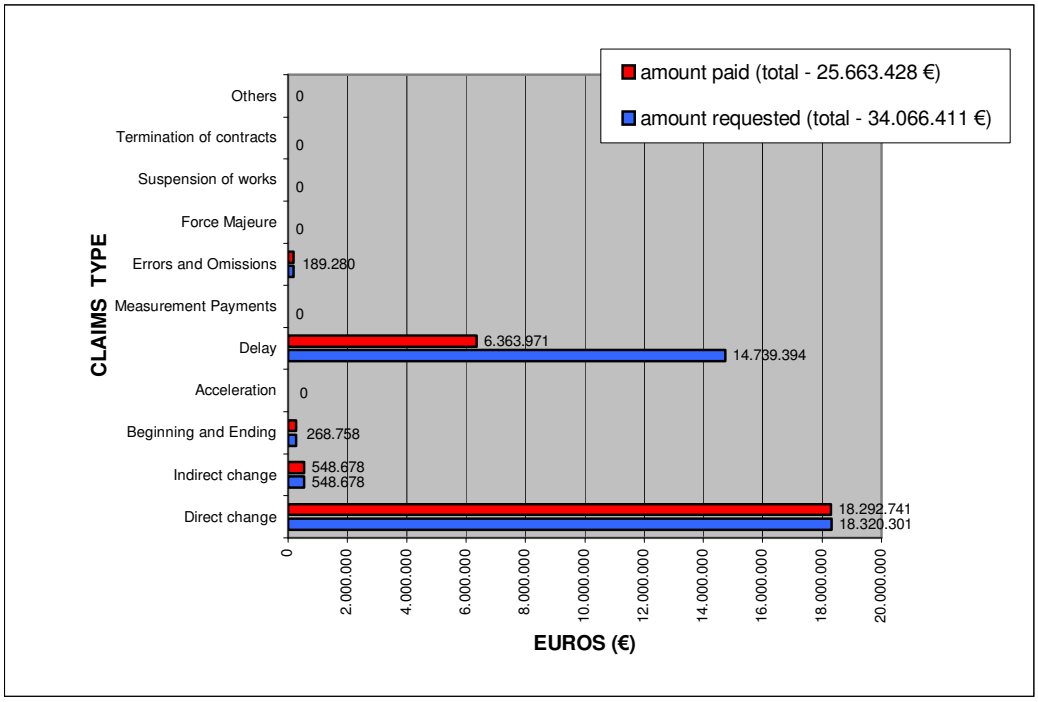

Fig. 7: Comparison between amounts paid and requested by type

The aggregation of *Direct Change* claims, *Indirect Change* claims and *Errors and Omissions* claims, in a single ***Changes*** claim type is represented in figure 8. This evidences the importance of *Changes* and *Delays* claims in railway construction projects concluded in Portugal in the last 5 years: together they represent 99% of the amount paid by the client.

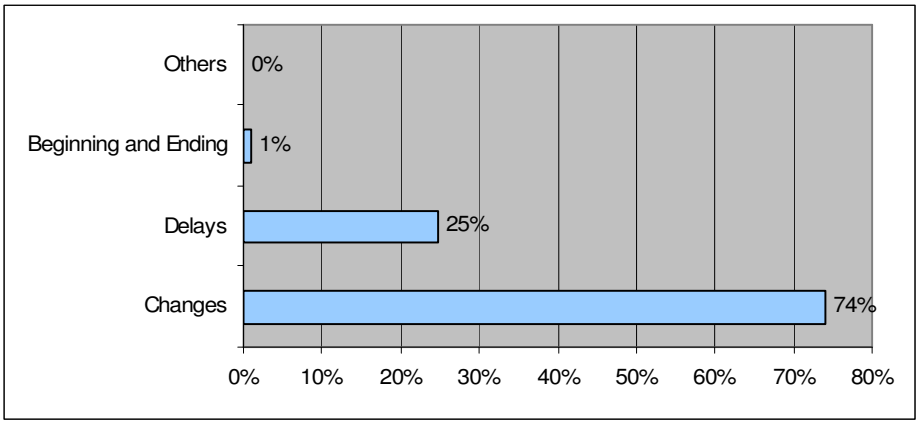

Fig. 8: Claim value distributed by types, with change claims aggregated

5. CONCLUSIONS

Conclusions of this survey must be carefully drawn. Firstly, the sample used was relatively small, even for the Portuguese industry size, although it covered more than € 770 million of construction investment[5]. Secondly, data relates to railway construction which depends on a single public client (*REFER*). Therefore, results apply to this particular segment of the construction industry. Only due to the sample size, no statistically tests could be made, including auto-correlation tests among the variables analysed (initial and final contract value, initial and final contract duration, claims requested and claims granted, etc.).

However, some relevant conclusions withdrawn from the results of the inquiry are summarised below:

- contractors still present mostly global claims, not separated by types;
- the eight types of construction claims proposed in a previous study [Moura, 2003], comprise all possible compensation events, as no genuine "Other" type has been identified in the projects surveyed;
- Portuguese regulations for public construction works accommodate all claims identified in the inquiry;
- project cost overruns reached 25% of the initial contract value and time overruns reached 85 % of the project initial duration in one case;
- while delays (or part of them) would have been contractor responsibility, no penalty clause or liquidated damages were assessed by the client[6];
- claims settled and paid by clients worth 50% of the claim value requested by contractors, which sustains problems in claim identification, quantification and cause-effect demonstration;
- the average values of the variables studied does not significantly change by withdrawing from the sample the 4 biggest projects, for which the initial contract value was significantly higher that the average of the rest.

Moreover, it may be concluded for the importance of typifying and clarifying the presentation of claims, identifying them by their types or compensation events, in order to simplify analysis by the client, allowing contractors to recover their damages straight forwardly. On the other hand, clients should pay special attention to the *Changes* and *Delay* claim types, because they represent 99% of the amount paid in the projects surveyed.

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[5] It represents about 4% of the Portuguese investment in public works, for the period analysed.
[6] The application of the contractual penalty clause was mentioned in one project only

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